



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,910	12/31/2001	Gyu-chan Jun	1293.1300	6060

21171 7590 03/05/2004

STAAS & HALSEY LLP  
SUITE 700  
1201 NEW YORK AVENUE, N.W.  
WASHINGTON, DC 20005

EXAMINER

KLIMOWICZ, WILLIAM JOSEPH

ART UNIT	PAPER NUMBER
----------	--------------

2652

DATE MAILED: 03/05/2004

14

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/029,910

Applicant(s)

JUN ET AL.

Examiner

William J. Klimowicz

Art Unit

2652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 23, 2004, and the after-final amendment (Amendment B, Paper No. 9) filed on December 23, 2003, have been entered.

### ***Claim Status***

Claims 1, 2 and 4-24 are currently pending.

Claim 3 has been voluntarily cancelled by the Applicants.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7, 11, 12, 15-17, 23 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claims 7, 11, 15 and 23, the recitation of "the transparent window has a width of at least W corresponding to the following relationship:

$$W=(2t \cdot NA)/n$$

where t is a distance from an outer surface of the transparent window to the disk, NA is a numerical aperture of the lens of the pickup which emits the external light and n is a refractive index of the transparent window” is indefinite, in light of the fact that the claims are drawn *exclusively* to a disk cartridge and/or window. The formulaic ranges recited in claims 7, 11, 15 and 23, however, are required to include positively recited structure such as an optical pickup lens, which is exclusive to the limitations found in claims 7, 11, 15 and 23.

Moreover, the structure and/or material and/or composition of the transparent window is thus dependent upon non-positively set forth variable structure (e.g., the optical lens which has a prescribed numerical aperture NA), thus the requirements of the window are dependent upon structure which is not positively set forth in the claims, thus rendering the metes and bounds of the claim unascertainable.

As set forth in the MPEP 2173.05(a), reference to an object that is variable may render the claim indefinite:

A claim may be rendered indefinite by reference to an object that is variable. For example, the Board has held that a limitation in a claim to a bicycle that recited “said front and rear wheels so spaced as to give a wheelbase that is between 58 percent and 75 percent of the height of the rider that the bicycle was designed for” was indefinite because the relationship of parts was not based on any known standard for sizing a bicycle to a rider, but on a rider of unspecified build. *Ex parte Brummer*, 12 USPQ2d 1653 (Bd. Pat. App. & Inter. 1989).

Claims 12, 16, 17 and 24 are also rejected under this statute due to their dependency upon the aforementioned rejected claims.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 5, 7, 10, 11, 13-16 and 18-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Goto et al. (JP 62-267985).

As per claim 1, 13 and 19, Goto et al. (JP 62-267985) discloses a disk cartridge (12) comprising: a case (12) to contain a disk (11); and a transparent window member (13, 14) having top and bottom surfaces, attachable to and detachable from the case (12) (e.g., see, *inter alia*, page 6 - last paragraph of English translation of Goto et al. (JP 62-267985)) to allow an external light (from objective lens (4)) to access opposing surfaces of the disk (11) in the case (12).

As per claim 2, wherein the transparent window member (13, 14) is installed so that an outer surface of the transparent window member (13, 14) is inwardly depressed relative to a surface of the case (12) (e.g., see FIG 4, wherein member (14) is slightly inwardly depressed).

As per claim 4 and also claims 10, 14 and 21, wherein the transparent window member (13, 14) is formed of at least one of a glass and acryl (e.g., glass - see page 7, first full paragraph of the English translation of Goto et al. (JP 62-267985)).

As per claim 5, wherein the transparent window member (13, 14) is installed such that an outer surface of the transparent window member (13, 14) is level with a surface of the case (12). For example, see FIG. 4, wherein the window (17) is level with case surface (12).

Art Unit: 2652

As per claim 18 and also claim 22, wherein the transparent window member (13, 14) is expressly installed to the case so as to prevent an inflow of a foreign matter into the case (12) - see English translation of Goto et al. (JP 62-267985).

As per claim 20 and also claim 16, wherein the transparent window (13, 14) has a height such that the outer surface of the transparent window is one of inwardly depressed relative to and at level with a surface of the case (see FIG. 4, as discussed with regard to claims 2 and 5).

With regard to claims 7, 11, 15 and 23, the formulaic relationship set forth therein is considered to be a "intended use" relationship, since the formula recited therein includes a variable (i.e., NA - numerical aperture) that is exclusively associated with structure (an objective lens) that the Applicants consider, and in fact steadfastly maintain, is not a requisite of the claim scope. Thus, since the cartridge of Goto et al. (JP 62-267985) has the capability to be used in a system inclusive of a lens having a prescribed numerical aperture, the claims 7, 11, 15 and 23 are seen to be capable of being met by the structure of Goto et al. (JP 62-267985), when the cartridge of Goto et al. (JP 62-267985) is used in combination with a lens system of a prescribed NA lens.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-9, 11, 15-17 and 23 are rejected under 35 U.S.C. 103(a) as being obvious over Goto et al. (JP 62-267985).

Art Unit: 2652

See the description of Goto et al. (JP 62-267985), *supra*.

With regard to claims 7, 11, 15 and 23 (and as well as claims 8, 9 and 17), moreover, assuming arguendo, that the Applicants can somehow “have their cake and eat it too” (i.e., having an intended use variable parameter (i.e., NA)) that is not positively required to be a part of the positively recited cartridge, and yet, to define over the art, is now somehow “positively” incorporated into a lens/cartridge system combination), the Examiner still maintains that given the teachings of Goto et al. (JP 62-267985) as a whole, it would have been obvious to use the cartridge of Goto et al. (JP 62-267985) within an objective lens system such that it meets the open-ended range of values set forth by the variables, including those positively associated with structure, and even those variables NOT positively associated with structure as set forth in claims 7, 11, 15 and 23.

That is, assuming now that the variable NA associated with a lens not positively set forth in the claims, can now somehow be drawn into the positive structure of the disk cartridge, and although Goto et al. (JP 62-267985) remains silent as to the specific relationships set forth in claims 7, 11, 15 and 23 or a prescribed dimension as set forth in claims 8, 9 and 17, it is noted that, given the teachings of providing a transparent window within an access window of a disk cartridge such that light for recording/reproducing by an optical pickup lens having a predetermined numerical aperture, is transmissive thereto, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have had the transparent window of Goto et al. (JP 62-267985) so as to interact with recording lens of an optical pickup, to arrive at a width of window within the range set by the formulaic relationship prescribed in the claims. Note that as far as the Applicants are apparently concerned, the

Art Unit: 2652

formulaic range as set forth in claims 7, 11, 15 and 23, is an intended use limitation. That is, since Applicants steadfastly maintain that the claims are drawn to the cartridge, *per se*, and do not require an objective lens, all that is required for Goto et al. (JP 62-267985) to meet such a formulaic range is the ability of the cartridge of Goto et al. (JP 62-267985) to be used with an objective lens system with its numerical aperture (NA). Since all objective lens systems include an objective lens with an inherent NA (numerical aperture), a lens system can be readily designed to meet the "intended use" equation of claims 7, 11, 15 and 23.

The rationale is as follows: one of ordinary skill in the art would have been motivated to have had the transparent window of Goto et al. (JP 62-267985) provided so as to interact with recording lens of an optical pickup, to arrive at a width of window within the range set by the formulaic relationship prescribed in the claims in order to include a window which allows sufficient light to interact with the disk within the cartridge, while minimizing its size such that potential damage or unnecessary window material is thus reduced. No new or unobvious result is seen to be obtained by providing a range or size of window width for the disk cartridge of Goto et al. (JP 62-267985), given the teachings of Goto et al. (JP 62-267985) taken as a whole and the general knowledge available to one having ordinary skill in the art. To arrive at a particular sized window width would have been within the realm of routine optimization /experimentation to thus establish a window width size which performs with a prescribed optical lens.

Moreover, absent a showing of criticality (i.e., unobvious or unexpected results), the relationships set forth in claims 7-9, 11, 15, 17 and 23, given the disclosure of Goto et al. (JP 62-



Art Unit: 2652

267985), are considered to be within the level of ordinary skill in the art.

Additionally, the law is replete with cases in which when the mere difference between the claimed invention and the prior art is some range, variable or other dimensional limitation within the claims, patentability cannot be found.

It furthermore has been held in such a situation, the Applicant must show that the particular range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range. *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

Moreover, the instant disclosure does not set forth evidence ascribing unexpected results due to the claimed dimensions. See *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338 (Fed. Cir. 1984), which held that the dimensional limitations failed to point out a feature which performed and operated any differently from the prior art.

Claims 6, 12 and 24 are rejected under 35 U.S.C. 103(a) as being obvious over Goto et al. (JP 62-267985) in view of Hagiwara (JP 01-315085 A).

See the description of Goto et al. (JP 62-267985), *supra*.

With regard to claims 6 and 12 and 24, although Goto et al. (JP 62-267985) does not expressly disclose a shutter which selectively opens and closes to reveal the transparent window member of the disk cartridge, Hagiwara (JP 01-315085 A) teaches an analogous disk cartridge having a disk disposed therein, and a transparent window member (4). The disk cartridge further includes a shutter (5) which selectively opens and closes to reveal the transparent window member (4).

Art Unit: 2652

Given the teachings of Goto et al. (JP 62-267985) as applying a light transmissive window to a head access opening of a disk cartridge to prevent infiltration of dust/debris into the cartridge, and the suggestion of Hagiwara (JP 01-315085 A) to further incorporate a shutter over the transparent window member of such a cartridge, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a shutter so as to cover the window member of Goto et al. (JP 62-267985), as taught by Hagiwara (JP 01-315085 A).

The rationale is as follows: it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a shutter so as to cover the window member of Goto et al. (JP 62-267985), as taught by Hagiwara (JP 01-315085 A) in order to protect the window member of Goto et al. (JP 62-267985) from scratches, damage, chipping, etc., as suggested by Hagiwara (JP 01-315085 A).

### *Response to Arguments*

Applicants' arguments filed December 23, 2003 (Paper No. 9) have been fully considered but are deemed moot in view of the new grounds of rejection, as it pertains to the art.

Applicants' arguments filed December 23, 2003 (Paper No. 9) have been fully considered as it pertains to the rejection under 35USC 112, 2<sup>nd</sup> paragraph, but they are not persuasive.

The Applicants contend that the claims 7, 11, 15 and 23 (and claims that depend therefrom), are not indefinite and that "[o]ne of ordinary skill in the art can easily understand the parameters set forth in the claims with regard to the disk cartridge." See Applicants' arguments made on page 6 of Paper No. 9.

The Examiner respectfully disagrees with the Applicants' characterization of the rejection

Art Unit: 2652

of claims 7, 11, 15 and 23 (and claims that depend therefrom) under 35 USC 112 2<sup>nd</sup> paragraph. While the Examiner agrees with the Applicants that one certainly can *understand* the parameters set forth in the claims with regard to the cartridge, as alleged by the Applicants, the claims in question still do not satisfy the requirements of 35 USC 112 2<sup>nd</sup> paragraph. Moreover, claims 7, 11, 15 and 23 include a formulaic range, wherein the formula recited therein includes parameters based on positively set forth structure (e.g., t, n and W) and a parameter that is based on structure which is completely exclusive to the cartridge, *per se*, as admitted by the Applicants. Thus, the scope of protection sought by the Applicants with regard to the offending claims, cannot in anyway be readily ascertained with any degree of certainty. The width of the cartridge (based on the formula), depends on a variable (NA - numerical aperture) of an optical lens. However, the lens is not at all required by the claim according to the Applicants. Thus, the range of the window width (W) not only is unspecified, but could be an infinite number of values, even exceeding the dimension of the cartridge itself. Thus, the claims lack a scope which would permit one of ordinary skill in the art a reasonable appraisal of the dimensions of the window width of the disk cartridge. As noted *supra*, a claim may be rendered indefinite by reference to an object that is variable. *Ex parte Brummer*, 12 USPQ2d 1653 (Bd. Pat. App. & Inter. 1989).

### ***Conclusion***

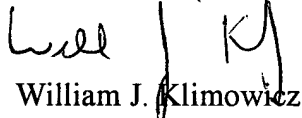
Any inquiry concerning this communication or earlier communications from the examiner should be directed to William J. Klimowicz whose telephone number is (703) 305-3452. The examiner can normally be reached on Monday-Thursday (6:30AM-5:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

Art Unit: 2652

supervisor, Hoa T. Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
William J. Klimowicz  
Primary Examiner  
Art Unit 2652

WJK